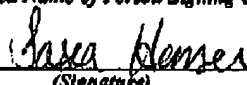

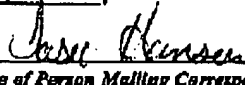
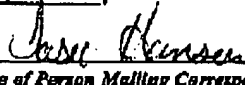
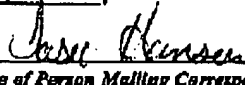


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|---|-----------------------------|---------------------|-------------------------|--|
| CERTIFICATE OF TRANSMISSION BY FACSIMILE (37 CFR 1.8) | | | Docket No. 8CL-7174A | |
| Applicant(s): Kustov, et al. | | | | |
| Application No. 09/682,010 | Filing Date July 9, 2001 | Examiner Johnson | Group Art Unit 1725 | |
| Invention: PREPARATION OF CATALYSTS USEFUL IN THE PREPARATION OF PHENOL AND ITS DERIVATIVES | | | | |
| RECEIVED CENTRAL FAX CENTER NOV 22 2005 | | | | |
| I hereby certify that this <u>Transmittal Letter (1pg) and Reply to Examiner's Answer (4pgs)</u> (Identify type of correspondence) | | | | |
| is being facsimile transmitted to the United States Patent and Trademark Office (Fax. No. <u>571-273-8300</u>) | | | | |
| on <u>November 22, 2005</u> (Date) | | | | |
| <u>Tasia Hansen</u> (Typed or Printed Name of Person Signing Certificate) | | | | |
| <u></u> (Signature) | | | | |
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|--|------------------------------------|----------------------------|--|-------------------------------|---------------------------------|--|--|--|--|
| TRANSMITTAL LETTER (General - Patent Pending) | | | | | Docket No. 8CL-7174A | | | | |
| In Re Application Of: Kustov, et al. | | | | | | | | | |
| Application No. 09/682,010 | Filing Date July 9, 2001 | Examiner Johnson | Customer No. 43,248 | Group Art Unit 1725 | Confirmation No. 1039 | | | | |
| Title: PREPARATION OF CATALYSTS USEFUL IN THE PREPARATION OF PHENOL AND ITS DERIVATIVES | | | | | | | | | |
| <u>COMMISSIONER FOR PATENTS:</u> | | | | | | | | | |
| Transmitted herewith is: Reply to Examiner's answer to Appeal Brief | | | | | | | | | |
| In the above identified application. | | | | | | | | | |
| <input checked="" type="checkbox"/> No additional fee is required. <input type="checkbox"/> A check in the amount of _____ is attached. <input checked="" type="checkbox"/> The Director is hereby authorized to charge and credit Deposit Account No. 07-0893 as described below. <input type="checkbox"/> Charge the amount of _____ <input checked="" type="checkbox"/> Credit any overpayment. <input checked="" type="checkbox"/> Charge any additional fee required. <input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. | | | | | | | | | |
|  _____ Signature | | | Dated: November 22, 2005 | | | | | | |
| Patricia S. DeSimone Reg. No. 48,137 Phone No. 860-286-2929 | | | <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="padding: 5px;">I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on November 22, 2005 (Date)</td></tr><tr><td style="padding: 5px; text-align: center;"> _____ Signature of Person Mailing Correspondence</td></tr><tr><td style="padding: 5px; text-align: center;">Tasia Hansen _____ Typed or Printed Name of Person Mailing Correspondence</td></tr></table> | | | | I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on November 22, 2005 (Date) |  _____ Signature of Person Mailing Correspondence | Tasia Hansen _____ Typed or Printed Name of Person Mailing Correspondence |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on November 22, 2005 (Date) | | | | | | | | | |
|  _____ Signature of Person Mailing Correspondence | | | | | | | | | |
| Tasia Hansen _____ Typed or Printed Name of Person Mailing Correspondence | | | | | | | | | |
| cc: | | | | | | | | | |

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08CL7174-16

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|-------------|--|---|----------------------|
| Appellants: | Kustov, et al. |) | |
| Serial No.: | 09/682,010 |) | Group Art Unit: 1725 |
| Filed: | July 9, 2001 |) | |
| For: | PREPARATION OF CATALYSTS USEFUL IN THE PREPARATION OF PHENOL AND ITS DERIVATIVES |) | Examiner: Johnson |

VIA FACSIMILE: 571-273-8300
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO EXAMINER'S ANSWER TO APPEAL BRIEF

08CL7174-16

I. REMARKS

Claims 1-5 and 14-16 are Non-Obvious over Monque.

As indicated by the Examiner, a *prima facie* case of obviousness based on overlapping ranges can be rebutted by showing the criticality of the claimed range. "In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934. The Examiner has asserted that the Applicants have not demonstrated that the claimed range of "at least 100 degrees" with respect to the temperature differential is critical. The Examiner goes on to say, "there has been no showing that a temperature difference of 100°C is vastly different than a temperature difference of 50°C." (Page 7, Examiner's Answer) Appellant respectfully disagrees.

Unexpected results with regard to a catalyst can reasonably be demonstrated by the performance of the catalyst in a reaction. A measure of performance would reasonably include conversion of the reactant or reactants to product, selectivity of the reaction for the desired product, yield of the product and deactivation. In Example 1, as shown in Table 1, a reaction using a catalyst calcined at a 350°C for the first and second steps has a conversion of 10%, a selectivity of 97% and a yield of 9.7%. The catalyst itself demonstrates a deactivation of 50% over 60 minutes. In contrast, a reaction using a catalyst calcined at 350°C for the first step and at 450°C for the second step has a conversion of 12% (an increase), a selectivity of 95% (a decrease) and a yield of 11.4% (an increase). Notably the catalyst demonstrates significantly less deactivation (42%).

With regard to the Examiner's assertion that there is no showing that a temperature difference of 100°C is vastly different than a temperature of 50°C Appellants respectfully assert that the standard of *Woodruff* is a showing that the claimed range achieves unexpected results relative to the prior art range. *Monque* teaches that a catalyst can be calcined in a first stage at 120-350°C for 1-6 hours and in a second stage at 350-700°C. Thus *Monque* teaches calcination in a first stage at 350°C and a second stage at 350°C as performed in Example 1 of the pending application. Appellants assert that they have met the standard of *Woodruff* by showing that the claimed range achieves unexpected results relative to the prior art range. The Examiner's

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apparent assertion that the relevant comparison would be a fifty degree temperature differential has no particular basis in Monque and appears to be somewhat arbitrary.

The Examiner has indicated that Monque teaches calcination conducted under a flow of air. In particular, Monque teaches calcination under "a flow of air containing water vapor equivalent to about 0.5 kg H₂O/hour-kg of catalyst." (Col. 5, lines 12-13) Applicants respectfully assert that this is outside the scope of the pending claims.

The instant claims require that the catalyst be heated in the presence of a flowing gas. As indicated in the specification, the flowing gas is dry, particularly since the intention of the first calcination step, as taught in paragraph [0012] is to remove adsorbed water and if calcination is conducted in the presence of water vapor then adsorbed water would not be removed. Similarly, paragraph [0029] teaches using dry air. Accordingly, the term "flowing gas" of the claims is properly construed to be limited to dry gases and hence calcining in the presence of 0.5 kg H₂O/hour-kg of catalyst would be outside the scope of the claims. "The construction that ... most naturally aligns with the patent's description of the invention will be, in the end, the correct construction" *Phillips v. AWH Corporation*, 415 F.3d 1303, 75 USPQ.2d 1321. Appellants respectfully assert that Monque does not explicitly meet the claimed limitation.

II. CONCLUSION

In summary, Claims 1-5 and 14-16 are non-obvious over the art of record. For the reasons cited above, Appellants respectfully submit that all of the claims are allowable and the application is in condition for allowance. Appellants respectfully request reversal of the outstanding rejections and allowance of this application.

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If there are any additional charges with respect to this Response, please charge them to
Deposit Account No. 07-0893.

Respectfully submitted,

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